

SECTION 1

Introduction

This report describes work performed by CH2M HILL for the U.S. Environmental Protection Agency (EPA), Region IX under work assignment (WA) 046-RICO-0959. This WA authorizes CH2M HILL to assist EPA in conducting a quarterly groundwater monitoring program as part of the Remedial Investigation/Feasibility Study (RI/FS) in the San Fernando Valley (SFV). In addition, as an important component of this monitoring program, CH2M HILL collects and integrates all available water quality and water level data into the SFV Geographic Information System (GIS). Monitoring well data from local facilities in the SFV, transmitted through the California Regional Water Quality Control Board (RWQCB), California Department of Toxic Substances Control (DTSC), and Lockheed Aeronautical Systems Corporation (LASC) are included in the database. Data from production wells operated in the SFV are obtained from local groundwater purveyors (Los Angeles Department of Water and Power (LADWP), the Cities of Glendale and Burbank, and Crescenta Valley County Water District) and were also incorporated in the GIS database. The SFV GIS is the primary data source for generation of concentration contour maps accompanying this report.

Previous reports for EPA's groundwater monitoring program were completed under the ARCSWEST contract, which ended in January 1999. Work on this WA under the Response Action Contract (RAC) began in the fall of 1999. Therefore, during 1999 only the annual sampling event was conducted. The results of this sampling event conducted from November 29 through December 15, 1999, and January 11 through January 13, 2000 is described in this report.

1.1 Setting

In 1984, EPA proposed four sites within the SFV for inclusion on the National Priority List (NPL): North Hollywood, Crystal Springs, Pollock, and Verdugo. Currently, EPA is managing the four areas as one large site referred to as the SFV Superfund Site. This site includes the four NPL sites and adjacent areas where groundwater contamination is known or presumed to have migrated (Figure 1-1). Currently, there are 87 RI monitoring wells located in and adjacent to the four NPL sites. Three of the shallow water table wells (vertical profile borings [or VPBs]) (PO-VPB-04, PO-VPB-09, and PO-VPB-11) are screened in bedrock and do not have pumps installed (Figure 1-2). Thus, these wells have not been included in the sampling events described herein. Well completion details are presented in Appendix A.

1.2 Background

Trichloroethylene (TCE) and tetrachloroethylene (PCE) data obtained from CH2M HILL's SFV GIS were used to separate the 84 RI wells into two categories prior to beginning the monitoring program in 1992: those recommended to be sampled quarterly and those recommended to be sampled annually. All 84 of the RI wells were originally included in the

annual monitoring program. Of these 84, 41 wells historically having concentrations of TCE and/or PCE in excess of federal and state maximum contaminant levels (MCLs) were placed into the quarterly monitoring program (EPA, August 1991). This sampling frequency has been modified by EPA during the history of the monitoring program based on observed concentrations of volatile organic compounds (VOCs) and/or other contaminants of concern. With the beginning of sampling activities under RAC, EPA has divided the RI monitoring wells into two categories: an annual sampling program including all 84 monitoring wells; and, a quarterly sampling program including 45 of the 84 monitoring wells. A summary of RI wells sampled during the fourth quarter (annual) sample event of 1999 is presented in Table 1-1.

1.3 Report Organization

This report is organized into sections that describe the activities and analytical results of the sampling event stated above. Section 2 describes the observations, procedures, activities, field measurements and analytical results of the fourth quarter sampling event. Section 3 presents a historic comparison of the analytical data from the fourth quarter. Included are relationships between water levels, TCE, PCE, other VOCs, and nitrate data. Historical concentrations of TCE, PCE, and nitrate are also presented graphically in this section.

Completion data for RI monitoring wells are presented in Appendix A. Criteria for rationale used in selection of data representative of current conditions are presented in Appendix B. Appendix C contains information on submersible pump installation. Appendix D includes results of the annual sampling event conducted from November 29 to December 13, 1999, and January 11 to 13, 2000. Summaries of all detected compounds for this sampling event and quality assurance samples are presented in Appendixes E and F, respectively. Additional detail of the shallow zone TCE and PCE concentration contour maps along with well locations are located in Appendixes G and H.